

Table SI. Immunohistochemical antibodies and protocols.<sup>a</sup>

Antibody	Manufacturer	Catalog number	Platform	Antigen retrieval	Primary antibody incubation	Detection	Dilution
Synaptophysin	Nichirei	#713831	Histostainer 36A	Heat PRO II, 20 min	30 min at room temperature	N-Histofine Simple Stain Max-PO, 30 min at room temperature	Ready for use
Chromogranin	Nichirei	#712751	Histostainer 36A	None	30 min at room temperature	N-Histofine Simple Stain Max-PO, 30 min at room temperature	Ready for use
CD56	Nichirei	#718191	Histostainer 36A	Heat PRO II, 20 min	30 min at room temperature	N-Histofine Simple Stain Max-PO, 30 min at room temperature	Ready for use
TTF-1	Dako; Agilent Technologies, Inc.	IR056	Histostainer 36A	Heat PRO II, 20 min	30 min at room temperature	N-Histofine Simple Stain Max-PO, 30 min at room temperature	Ready for use
ASCL1	BD Biociences	#556604	Lecia BOND III	ER2, 20 min	15 min at room temperature	Bond Polymer Refine, 30 min at room temperature	1:50
NEUROD1	Abcam	ab60704	Manual	ImmunoSaver, 1:200, 45 min at 98°C	Overnight at 4°C	N-Histofine Simple Stain Max-PO, 30 min at room temperature	1:800
POU2F3	MilliporeSigma	HPA01965 2	Lecia BOND MAX	ER2, 20 min	20 min at room temperature	Bond Polymer Refine, 30 min at room temperature	1:200
YAP1	Cell Signaling Technology, Inc.	#14074	Lecia BOND III	ER1, 20 min	15 min at room temperature	Bond Polymer Refine, 30 min at room temperature	1:400
MYC	Abcam	ab32072	Lecia BOND MAX	ER2, 40 min	20 min at room temperature	Bond Polymer Refine, 30 min at room temperature	1:100

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<sup>a</sup>All tissue specimens were fixed in 10% formalin neutral buffer solution at room temperature for 20 h (biopsy specimens) or 5 days (autopsy specimens), and embedded in paraffin before sectioning to 5  $\mu\text{m}$ . Sections were blocked at room temperature for 5 min or 15 min (only for NEUROD1) with 0.3% hydrogen peroxide. Immunostaining results were observed using a light microscope.

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